WHAT IS CLAIMED IS:

1. A method of inhibiting angiogenesis in a patient in need of such treatment comprising administering to the patient a human MDA-7 polypeptide or a nucleic acid expressing the human MDA-7 polypeptide in eukaryotic cells, whereby the MDA-7 polypeptide inhibits angiogenesis in the patient.

2. The method of claim 1, wherein said patient exhibits an angiogenesis-related disease.

3. The method of claim 2, wherein the angiogenesis-related disease is further defined as angiogenesis-dependent cancer, a benign tumor, rheumatoid arthritis, psoriasis, an ocular angiogenic disease, Osler-Webber Syndrome, myocardial angiogenesis, plaque neovascularization, a telangiectasia, hemophiliac joint, angiofibroma, wound granulation, cat scratch disease, an ulcer, an intestinal adhesion, atherosclerosis, scleroderma, or a hypertrophic scar.

4. The method of claim 3, wherein angiogenesis-dependent cancer is further defined as a solid tumor, leukemia, or a tumor metastasis.

5. The method of claim 3, wherein the benign tumor is further defined as a hemangioma, a neuroma, a neurofibroma, a trachoma, uterine fibroid, hamartoma, teratoma, or a pyogenic granuloma.

6. The method of claim 2 wherein the ocular angiogenic disease is further defined as diabetic retinopathy, retinopathy of prematurity, macular degeneration, corneal graft rejection, neovascular glaucoma, retrolental fibroplasia, or Rubeosis.

7. The method of claim 1, wherein the nucleic acid is an expression vector.

8. The method of claim 7, wherein the expression vector is a viral vector.

9. The method of claim 8, wherein the viral vector is administered at between 10^3 and 10^{13} pfu.

10. The method of claim 8, wherein said viral vector is an adenoviral vector, a retroviral vector, a vaccinia viral vector, an adeno-associated viral vector, a polyoma viral vector, or a herpesviral vector.

11. The method of claim 8, wherein said viral vector is an adenoviral vector.

12. The method of claim 1, wherein said nucleic acid further comprises a CMV IE, dectin-1, dectin-2, human CD11c, F4/80, SM22 or MHC class II promoter.

13. The method of claim 1, wherein the MDA-7 polypeptide or nucleic acid is administered to the patient by direct injection into an area in need of inhibition of angiogenesis.

14. The method of claim 13, wherein the patient is administered multiple injections.

15. The method of claim 13, wherein the injection is performed locally to a disease site.

16. The method of claim 13, wherein the injection is performed regionally to a disease site.

17. The method of claim 13, wherein the injection is performed distally to a disease site.

18. The method of claim 1, wherein the MDA polypeptide or the nucleic acid is administered to the patient by continuous infusion.

19. The method of claim 1, wherein the MDA polypeptide or the nucleic acid is administered to the patient by intravenous injection.

20. The method of claim 1, wherein the MDA polypeptide or the nucleic acid is administered prior to or after surgery.

21. The method of claim 1, wherein the MDA polypeptide or the nucleic acid is administered before chemotherapy, immunotherapy, or radiotherapy.

22. The method of claim 1, wherein the MDA polypeptide or the nucleic acid is administered during chemotherapy, immunotherapy, or radiotherapy.

23. The method of claim 1, wherein the MDA polypeptide or the nucleic acid is administered after chemotherapy, immunotherapy, or radiotherapy.

24. The method of claim 1, wherein the patient is a human.

25. The method of claim 1, wherein the MDA polypeptide comprises amino acids from 1 to 206 of SEQ ID NO:2.

26. The method of claim 1, wherein the MDA polypeptide comprises amino acids from 49 to 206 of SEQ ID NO:2.

27. The method of claim 1, wherein the MDA polypeptide comprises amino acids from 75 to 206 of SEQ ID NO:1.

28. The method of claim 1, wherein the MDA polypeptide comprises amino acids from about 100 to about 206 of SEQ ID NO:2.

29. The method of claim 1, wherein the MDA polypeptide conprises amino acids from 125 to 206 of SEQ ID NO:2.

30. The method of claim 1, wherein the MDA polypeptide comprises amino acids from 150 to 206 of SEQ ID NO:2.

31. The method of claim 1, wherein the MDA polypeptide comprises amino acids from 175 to 206 of SEQ ID NO:2.

32. The method of claim 1, wherein the MDA polypeptide comprises amino acids from 182 to 206 of SEQ ID NO:2.

33. The method of claim 1, wherein the MDA polypeptide comprises a secretory signal.

34. The method of claim 33, wherein the secretory signal is further defined as a positively charged N-terminal region in combination with a hydrophobic core.

35. The method of claim 1, wherein the patient is a cancer patient.

36. A method of inhibiting endothelial cell differentiation in a patient comprising administering to the patient an effective amount of a human MDA-7 polypeptide or a nucleic acid molecule expressing the human MDA-7 polypeptide.

37. The method of claim 36, wherein a chemotherapeutic agent is administered prior to administration of the MDA-7 polypeptide or the nucleic acid molecule.

38. The method of claim 36 wherein a chemotherapeutic agent is administered after administration of the MDA-7 polypeptide or the nucleic acid molecule.

39. The method of claim 36, wherein the chemotherapeutic agent is a DNA damaging agent.

40. The method of claim 39, wherein the DNA damaging agent is gamma-irradiation, X-rays, UV-irradiation, microwaves, electronic emissions, adriamycin, 5-fluorouracil (5FU), etoposide (VP-16), camptothecin, actinomycin-D, mitomycin C, cisplatin (CDDP), or hydrogen peroxide.

41. The method of claim 38, wherein the chemotherapeutic agent is a cisplatin (CDDP), carboplatin, procarbazine, mechlorethamine, cyclophosphamide, camptothecin, ifosfamide, melphalan, chlorambucil, bisulfan, nitrosurea, dactinomycin, daunorubicin, doxorubicin, bleomycin, plicomycin, mitomycin, etoposide (VP16), tamoxifen, taxol, transplatinum, 5-fluorouracil, vincristin, vinblastin, methotrexate, or analog or derivative variant thereof.

42. The method of claim 36, wherein the nucleic acid is comprised within a viral vector.

43. The method of claim 36, wherein the nucleic acid is comprised in a lipid composition.

44. A method for promoting an immune response in a patient comprising providing to the subject an amount of an MDA-7 polypeptide effective to induce an immune response in the patient.

45. The method of claim 44, further comprising administering to the patient an antigen against which an immune response is promoted.

46. The method of claim 45, wherein the antigen is a tumor antigen, microbial antigen, viral antigen, or fungal antigen.

47. The method of claim 46, wherein the antigen is a tumor antigen.

48. The method of claim 46, wherein the antigen is a microbial antigen.

49. The method of claim 46, wherein the antigen is a viral antigen.

50. The method of claim 46, wherein the antigen is a fungal antigen.

51. The method of claim 47, wheren the tumor antigen is PSA, CEA, MART, MAGE1, MAGE 3, gp100, BAGE, GAGE, TRP-1, TRP-2, or PMSA.

52. The method of claim 44, wherein the MDA-7 is provided to the patient by administering to the subject an expression construct comprising a nucleic acid sequence encoding at least 50 contiguous amino acids of SEQ ID NO:2, wherein the nucleic acid sequence is under the transcriptional control of a promoter.

53. The method of claim 52, wherein the expression construct is a viral vector.

54. The method of claim 53, wherein the viral vector is an adenovirus vector, an adeno-associated virus vector, a herpesvirus vector, a retrovirus vector, a lentivirus vector, a vaccinia virus vector, or a polyoma vector.

55. The method of claim 44, wherein the antigen is provided to the patient by administering to the patient an expression construct comprising a nucleic acid

sequence encoding the antigen, wherein the nucleic acid sequence is under the transcriptional control of a promoter.

56. The method of claim 44, wherein the MDA-7, antigen, or both are provided to the patient more than one time.

57. The method of claim 44, wherein the MDA-7, antigen, or both are provided to the patient intravenously, directly, intraperitoneally, regionally, systemically, or orally.

58. The method of claim 44, wherein the MDA-7 and antigen are provided to the subject at the same time.

59. A method of inducing expression of IL-6, IFNγ, or TNFα in a cell comprising administering to the cell an effective amount of an MDA-7 polypeptide or a nucleic acid expressing the MDA-7 polypeptide.

60. The method of claim 59, wherein expression of IL-6 is induced.

61. The method of claim 59, wherein expression of TNFα is induced.

62. The method of claim 59, wherein expression of IFNγ is induced.

63. The method of claim 59, wherein the cell is in a patient.

64. A method of reducing cell damage from chemotherapy or radiotherapy in a cancer patient comprising administering to the patient an effective amount of a human MDA-7 polypeptide or a nucleic acid expressing the human MDA-7 polypeptide.

65. The method of claim 64, wherein the MDA polypeptide or nucleic acid is administered to the patient when chemotherapy or radiotherapys is administered.

66. The method of claim 64, wherein the MDA polypeptide or nucleic acid is administered to the patient after chemotherapy or radiotherapy is administered.

67. The method of claim 54, wherein the MDA polypeptide or nucleic acid is administered to the patient more than one time.